



Department of Biomedical Engineering
Graduate Seminar

Date
Wednesday, November 27th

Location
CKB Room 303

Time
11:45 AM

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Intelligent NeuroRobotics: From Smart Rehabilitation to Agile Assistance

Interactive robotic technologies have revolutionized the field of sensorimotor rehabilitation and have been successful in accelerating neural recovery and motor restoration through augmenting the engagement and, ultimately, promoting plasticity, for patients living with post-stroke disabilities. In addition, robots, interfaced with the human neural system, have been successfully utilized in the past decade to augment motor capabilities of disabled individuals for performing a number of activities of daily living and to enhance independence. Although neurorobotic systems have shown a great potential for delivering rehabilitation and assistance, there still exist several challenges and need to make the technology (a) more adaptable to and compatible with the variable biomechanical characteristics of the user, (b) more responsive to the intended movements, (c) more accessible, and (d) more intelligent in delivering assistance. This has led to active research in the fields of robotic rehabilitation and assistive prosthetic technologies. Motivated by the notes above, this talk aims to report on some recent developments covering multiple topics technically related to human-robot tele-interaction, stability and compatibility of rehabilitation robots, machine learning in telerobotic rehabilitation systems, and intelligent bio-signal processing and control for myoelectric prostheses.

Light refreshments will be served.